

IN THE CLAIMS:

All of the pending claims 2-21 and 23-44 are set forth below. The status of each claim is indicated with one of (original), (previously presented), (cancelled), or (currently amended).

Please AMEND claims 43 and 44 in accordance with the following:

1. (cancelled)
2. (previously presented) An optical sender according to claim 10, further comprising:
 - a circuit for supplying a power to said light source; and
 - a power supervisory circuit for monitoring on/off of supply of the power to said light source and outputting a power alarm during a given time period from a time the supply of the power to said light source becomes on or off.
3. (original) An optical sender according to claim 2, wherein said power supplying circuit comprises a constant current source.
4. (previously presented) An optical sender according to claim 10, further comprising:
 - a wavelength monitor for detecting the wavelength of said light beam; and
 - a circuit for outputting said wavelength alarm when the wavelength detected by said wavelength monitor is deviated from a predetermined range.
5. (original) An optical sender according to claim 4, further comprising means for controlling said light source so that the wavelength detected by said wavelength monitor is maintained constant.
6. (original) An optical sender according to claim 5, wherein:
 - said light source comprises a laser diode; and
 - said controlling means comprises means for controlling the temperature of said laser diode.
7. (original) An optical sender according to claim 4, wherein said wavelength monitor is provided between said light source and said optical modulator.

8. (original) An optical sender according, to claim 4, wherein said optical modulator is provided between said light source and said wavelength monitor.

9. (previously presented) An optical sender according to claim 4, wherein:
said light source comprises a laser diode for outputting a forward beam and a backward beam; and
said forward beam being supplied to said optical modulator, said backward beam being supplied to said wavelength monitor.

10. (previously presented) An optical sender comprising:
a light source for outputting a light beam;
an optical modulator for modulating said light beam in accordance with a main signal to output an optical signal; and
means for shutting down said optical signal when receiving a wavelength alarm relating to the wavelength of said light beam, said wavelength alarm being provided inside the optical sender, and
said shutting down means comprising:
an optical element for receiving said optical signal output from said optical modulator; and
means for controlling said optical element so that the transmittance of said optical element is reduced when receiving said wavelength alarm.

11. (original) An optical sender according to claim 10, wherein said optical element is a Mach-Zehnder type lithium niobate modulator.

12. (original) An optical sender according to claim 10, wherein said optical element is a Mach-Zehnder type semiconductor modulator.

13. (original) An optical sender according to claim 10, wherein said optical element is an electroabsorption type modulator.

14. (original) An optical sender according to claim 10, wherein said optical element is a semiconductor optical amplifier.

15. (previously presented) An optical sender according to claim 10, wherein said shutting down means comprises means for switching the operating point of said optical modulator and shutting down input of said main signal into said optical modulator when receiving said wavelength alarm.

16. (original) An optical sender according to claim 15, wherein said optical modulator is a Mach-Zehnder type lithium niobate modulator.

17. (original) An optical sender according to claim 15, wherein said optical modulator is a Mach-Zehnder type semiconductor modulator.

18. (original) An optical sender according to claim 15, wherein said optical modulator is an electroabsorption type modulator.

19. (previously presented) A terminal device for wavelength division multiplexing, comprising:

a plurality of optical senders for outputting optical signals having different wavelengths;
and

an optical multiplexer for receiving said optical signals to output wavelength division multiplexed signal light,

wherein each of said optical senders comprises:

a light source for outputting a light beam;

an optical modulator for modulating said light beam in accordance with a main signal to output an optical signal; and

means for shutting down said optical signal when receiving a wavelength alarm relating to the wavelength of said light beam, said wavelength alarm being provided inside of the respective optical sender,

said shutting down means comprising:

an optical element for receiving said optical signal output from said optical modulator; and

means for controlling said optical element so that the transmittance of said optical element is reduced when receiving said wavelength alarm.

20. (previously presented) An optical communication system for wavelength division multiplexing, comprising:

first and second terminal devices; and

an optical fiber transmission line for connecting said first and second terminal devices,

wherein at least one of said first and second terminal devices comprises:

a plurality of optical senders for outputting optical signals having different wavelengths; and

an optical multiplexer for receiving said optical signals to output wavelength division multiplexed signal light,

wherein each of said optical senders comprises:

a light source for outputting a light beam;

an optical modulator for modulating said light beam in accordance with a main signal to output an optical signal; and

means for shutting down said optical signal when receiving a wavelength alarm relating to the wavelength of said light beam, said wavelength alarm being provided inside of the respective optical sender,

said shutting down means comprising:

an optical element for receiving said optical signal output from said optical modulator; and

means for controlling said optical element so that the transmittance of said optical element is reduced when receiving said wavelength alarm.

21. (original) An optical communication system according to claim 20, further comprising at least one optical amplifier arranged along said optical fiber transmission line.

22. (cancelled)

23. (previously presented) An optical sender according to claim 31, further comprising:

a circuit supplying a power to said light source; and

a power supervisory circuit monitoring on/off of supply of the power to said light source and outputting power alarm during a given time period from a time the supply of the power to said light source becomes on or off.

24. (original) An optical sender according to claim 23, wherein said power supplying circuit comprises a constant current source.

25. (previously presented) An optical sender according to claim 31, further comprising:

a wavelength monitor detecting the wavelength of said light beam; and
a circuit outputting said wavelength alarm when the wavelength detected by said wavelength monitor is deviated from a predetermined range.

26. (original) An optical sender according to claim 25, further comprising a first controlling device controlling said light source so that the wavelength detected by said wavelength monitor is maintained constant.

27. (original) An optical sender according to claim 26, wherein:
said light source comprises a laser diode; and
said first controlling device comprising a temperature controller controlling the temperature of said laser diode.

28. (original) An optical sender according to claim 25, wherein said wavelength monitor is provided between said light source and said optical modulator.

29. (original) An optical sender according, to claim 25, wherein said optical modulator is provided between said light source and said wavelength monitor.

30. (previously presented) An optical sender according to claim 25, wherein:
said light source comprises a laser diode outputting a forward beam and a backward beam; and
said forward beam being supplied to said optical modulator, said backward beam being supplied to said wavelength monitor.

31. (previously presented) An optical sender comprising:
a light source outputting a light beam;
an optical modulator modulating said light beam in accordance with a main signal to output an optical signal; and

a shutting down device shutting down said optical signal when receiving a wavelength alarm relating to the wavelength of said light beam, said wavelength alarm being provided inside the optical sender,

said shutting down device comprising:

an optical element receiving said optical signal output from said optical modulator; and

a second controlling device controlling said optical element so that the transmittance of said optical element is reduced when receiving said wavelength alarm.

32. (original) An optical sender according to claim 31, wherein said optical element is a Mach-Zehnder type lithium niobate modulator.

33. (original) An optical sender according to claim 31, wherein said optical element is a Mach-Zehnder type semiconductor modulator.

34. (original) An optical sender according to claim 31, wherein said optical element is an electroabsorption type modulator.

35. (original) An optical sender according to claim 31, wherein said optical element is a semiconductor optical amplifier.

36. (previously presented) An optical sender according to claim 31, wherein said shutting down device comprises a switching device switching the operating point of said optical modulator and shutting down input of said main signal into said optical modulator when receiving said wavelength alarm.

37. (original) An optical sender according to claim 36, wherein said optical modulator is a Mach-Zehnder type lithium niobate modulator.

38. (original) An optical sender according to claim 36, wherein said optical modulator is a Mach-Zehnder type semiconductor modulator.

39. (original) An optical sender according to claim 36, wherein said optical modulator is an electroabsorption type modulator.

40. (previously presented) A terminal device for wavelength division multiplexing, comprising:

- a plurality of optical senders outputting optical signals having different wavelengths; and
- an optical multiplexer receiving said optical signals to output wavelength division multiplexed signal light,

- wherein each of said optical senders comprises:

- a light source outputting a light beam;

- an optical modulator modulating said light beam in accordance with a main signal to output an optical signal; and

- a shutting down device shutting down said optical signal when receiving a wavelength alarm relating to the wavelength of said light beam, said wavelength alarm being provided inside of the respective optical sender, and said shutting down device comprises:

- an optical element receiving said optical signal output from said optical modulator; and

- a second controlling device controlling said optical element so that the transmittance of said optical element is reduced when receiving said wavelength alarm.

41. (previously presented) An optical communication system for wavelength division multiplexing, comprising:

- first and second terminal devices; and

- an optical fiber transmission line connecting said first and second terminal devices;

- wherein at least one of said first and second terminal devices comprises,

- a plurality of optical senders outputting optical signals having different wavelengths; and

- an optical multiplexer receiving said optical signals to output wavelength division multiplexed signal light;

- wherein each of said optical senders comprises:

- a light source outputting a light beam;

- an optical modulator modulating said light beam in accordance with a main signal to output an optical signal; and

- a shutting down device shutting down said optical signal when receiving a wavelength alarm relating to the wavelength of said light beam, said wavelength alarm being provided inside of the respective optical sender, and said shutting down device comprises:

an optical element receiving said optical signal output from said optical modulator; and

a second controlling device controlling said optical element so that the transmittance of said optical element is reduced when receiving said wavelength alarm.

42. (original) An optical communication system according to claim 41, further comprising at least one optical amplifier arranged along said optical fiber transmission line.

43. (currently amended) An optical sender, comprising:
a light source outputting a light beam;
an optical modulator modulating the light beam in accordance with a main signal to output an optical signal; and
a shut-down device ~~reducing a power of the optical signal outputted from said optical modulator~~ shutting down the optical signal by switching an operating point of the optical modulator and shutting down an input of the main signal into the optical modulator when receiving a wavelength alarm relating to a wavelength of the light beam, the wavelength alarm being provided inside the optical sender, ~~wherein said light source keeps outputting said light beam when said shut down device receives said wavelength alarm relating to a wavelength of the light beam.~~

44. (currently amended) A method, comprising:
outputting a light beam;
modulating the light beam in accordance with a main signal to output an optical signal;
and
~~reducing a power of the optical signal outputted by said modulating~~ shutting down the optical signal by switching an operating point of the optical modulator and shutting down an input of the main signal into the optical modulator when receiving a wavelength alarm relating to a wavelength of the light beam, the wavelength alarm being provided inside an optical sender, ~~wherein said light source keeps outputting said light beam when said shut down device receives said wavelength alarm relating to a wavelength of the light beam.~~